

Appl. No. : 09/990,613  
Filed : November 21, 2001

provided in SEQ ID NO: 32, and is shown in FIG. 11. In another embodiment, the present invention provides a luciferase reporter construct driven by MUC5B sequences --1098 to +7, relative to the site of transcription initiation (*i.e.*, the MUC5B-b1 reporter construct). This promoter sequence is provided in SEQ ID NO: 31, and is shown in FIG. 10.--

#### REMARKS

All amendments to the Specification, including the replacement FIGURES, are to correct typographical and clerical errors. Amendment to FIGURES 10, 11 and 12 are to correct clerical errors in depiction of the termini of the nucleotide sequences. Evidence in support of these corrections is found in the Specification in TABLE 3 on page 67, which provides the correct termini positions for the nucleotide sequences provided in FIGS. 10, 11 and 12, in TABLE 2 on page 64, which provides the correct terminal nucleotide sequences in the PL1, PU2, PU1, PiL1 and PiU1 PCR primers, in FIGS. 6A-6H and 8, which together provide the complete MUC5B genomic sequence indicating the transcription start site (+1).

Amendment to the numbering of the views in FIGURES 6 and 11 are made in accordance with 37 C.F.R. § 1.84(u)(1), which requires that a single drawing consisting of multiple sheets be indicated by a number followed by a capital letter. In accordance with 37 C.F.R. § 1.121(d), marked-up copies of the originally filed drawings showing the proposed changes in FIGURES 6 and 10-12 are attached. Amendment to paragraphs 30 and 35 are made to reflect the corrected numbering of the FIGURE views.

Support for the amendment to paragraph 149 on page 46 is found in TABLE 3 on page 67, where the correct SEQ ID NOs are shown.

None of the amendments to the Specification, including the Drawings, constitute new matter.

#### SUMMARY

Applicants respectfully request entry of the above Amendment. Please charge any additional fees, including any fees for extension of time, or credit overpayment to Deposit Account No. 11-1410. A duplicate copy of this sheet is enclosed.

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Attached hereto at the APPENDIX is a marked-up version of the paragraph in the specification indicating the changes made to the paragraph by the current amendment. The attached APPENDIX is captioned "Version with markings to show changes made."

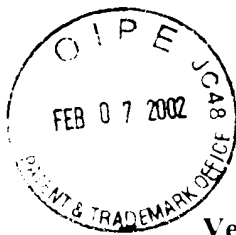
Respectfully submitted,

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## APPENDIX I

### Version with markings to show changes made

Deleted text is shown with strikethrough and added text is shown with underlining.

#### IN THE SPECIFICATION:

Paragraph number **30** on page 9 been amended as follows:

--[0030] ~~FIG. 6~~ FIGS. 6A-6H ~~shows~~ show 22,773 basepairs of human *MUC5B* genomic region isolated and sequenced from the Cos-1 genomic cosmid clone. This 22.7 kB encompasses 4169 basepairs of sequence upstream of the transcription start site, the 5'-UT and the 30 exons/introns upstream of the *MUC5B* large central exon.

Paragraph number **35** on page 10 been amended as follows:

--[0035] ~~FIG. 11~~ FIGS. 11A and 11B ~~shows~~ show the *MUC5B* genomic nucleotide sequence encompassing positions -4169 through +7 that were subcloned into the MUC5B-b2 luciferase reporter construct.--

Paragraph number **149** on page 46 been amended as follows:

--[0149] The present invention provides *MUC5B* reporter constructs suitable for use in drug screening protocols. In one preferred embodiment, the present invention provides a luciferase reporter construct driven by *MUC5B* sequences -4169 to +7, relative to the site of transcription initiation (*i.e.*, the MUC5B-b2 reporter construct). This promoter sequence is provided in SEQ ID NO: ~~32~~ 32, and is shown in FIG. 11. In another embodiment, the present invention provides a luciferase reporter construct driven by *MUC5B* sequences -1098 to +7, relative to the site of transcription initiation (*i.e.*, the MUC5B-b1 reporter construct). This promoter sequence is provided in SEQ ID NO: ~~31~~ 31, and is shown in FIG. 10.--

FIGURE 6A

1	ggtacccctg	gttgtgcctg	tgcgtcagtg	ggccagggtc	taagggctgt	gaagactcaa
61	catgcccaca	cctgctaact	ctgaacacca	ggcaactggc	ctgagacccc	cgggccttgc
121	tggacatctc	cccaggtgta	ctggggccagg	ggacaggggc	ctggccatcc	caacaccccag
181	gagcaagcag	ccgtccacct	gcccagggtc	ccgaggcccg	gaacaccttc	ctgctggggc
241	cacccagccc	tggacctgtc	ccgtttggtc	acaagatggg	acctcgggc	catacagcagg
301	ttagccccca	ggagcgtggc	tctggcctgg	taaggccctc	accccaggag	ttgggggggc
361	cccgctgcag	ggagcaggag	gctgcaggag	tggagggtcc	cacacagcta	ccactcccta
421	tccccagcac	agcctggggc	ctggctctga	gtacacatcc	tggggcctgg	ctctgagcag
481	accaaagacc	catacctgct	ttgtgacccc	ctgggtgtgt	cctgacaccc	cagggtgtca
541	gcttggagct	ggggcccagc	tcagtgcctg	ggagctgatg	gaacctgggg	ccggctcag
601	tgcctggctg	ctgatggaca	ctggggcctg	gctcaaacct	gcacctgtgt	ggtcggggga
661	ggggagggct	gagccacgtg	gggaacccag	ccccagtgc	gactcttttc	ggtggccaa
721	ccctccaggt	gtccccccag	gctgaggggc	tgggtctggg	gcagctgggt	acagcagatg
781	gtggccctga	tcactgggtc	ctggacggcc	tctgaagggg	tctgtggggg	cctggacggg
841	tccccattca	tggcaggatt	aacccccctc	gggttctgtg	tggctcaggc	cgcccccttg
901	tctccactgc	cccttggcca	gaatgagggg	cagtgcacca	cccagggtct	ggcctgggtc
961	agactccgtc	agagcccgag	ggcaagttcc	tggcacgtcc	gaggtgggag	gctccctctg
1021	gctccaggag	gctgtgcctg	gccccccctc	ccggcaggaa	ccggctgtgt	ccccctcttc
1081	cccttatctt	ctgtcttcag	cgcttccaac	tgtgaaggag	tgaactcttc	aaacacgctg
1141	agcaaacagg	ccgaactccc	agggccgcat	ccgggatgtc	tcaatagctg	tggccttgac
1201	gtccacctcg	gaacccctgc	ccggacccag	ccagcttccc	aattggccct	ctggccgggg
1261	aggtgcctag	tgggagggac	gagggcaaa	tggggccccc	cacttgtttg	gtgtcactgt
1321	gtgcacagcg	ccactggcgg	gcgaggtctg	tccagggtgg	agggggggag	ggttggacca
1381	ccggcaactg	gcggggacag	aggagctgcc	tgagggtccc	agctctgcac	tggagaaaaa
1441	gctatctctg	tgatgcagag	gtgcccggcc	cactcagagt	gggggtcagg	ggtgtgtccc
1501	ccagtggggc	gcccagccccc	atgaaggccg	cgggcacccg	ccgtggctag	ggaggccagg
1561	ggacaggcag	tggggggccag	cagggggagc	actaggcttg	gccccagcac	ccagggtggg
1621	atcggcttgt	gagctgggag	cgccggccag	gaggggggat	gtcacgaggg	cttggctaa
1681	gtggggagac	tgggggggtg	cgtcgggggg	acgtctgcag	cagaggcctg	ggcagcaggc
1741	acacccctcc	tgcacgtggc	aggaacggag	cgccacagcg	gcccgttagcc	ccccatttgc
1801	ccagccttgc	ctggagcagg	caggaaggcc	ggggagaggg	gtctggctgg	ggcctgggtg
1861	cagtcacagc	cacgagccca	gggggtgggg	ctctggccca	cccttcagac	cattgtcaag
1921	gcccacttgc	ccaggcatgc	ccggccacccc	ttccacccgt	ccgtgtgtga	gogggtctac
1981	cggtctggat	gtgaaagaga	gcttggagac	ccagagagcc	tgggaacott	cagctttgga
2041	agtgaactcg	gtgggggtgg	tgggggggag	acaggctctg	gagtcccgga	agtgagcggg
2101	gagctacgtc	gagatctggg	agacccctcg	cccccaacca	ggtacagggc	caggcagaag
2161	cccgaggtgt	gccttgagtt	aaagaaaacc	tcacaaaaga	caaaaggaga	aggcgggttc
2221	cagctctcac	cacagccctc	gcgtcttgag	gagccacctg	ggggcttcag	ccatgagggg
2281	tgcacaggtg	caaaaacggg	cagctccgtt	cagctccgtg	tgcagctgtc	tcgggcctcc
2341	cattctccaga	acgttctcac	attcccaagg	tjaaaccttg	tcccatgcca	acacacagctc
2401	acacacccct	ctgcacagcc	ctggggccca	ccgtccacac	tcctctcttg	cggtttccat
2461	gactccaggg	gcagcacacg	agtggccctc	ctggcctttg	tcctctgtgt	ccacctgctt
2521	cactctgcac	agtgtcccca	gcttccccca	tggagcagcc	tgggcacagc	ctccttttcc
2581	acggctgaac	cgtattccac	cgcacgggac	agcctcaaga	tgttgaccca	gtctctccgc
2641	cagggacaca	tgggcagctt	ctgccccttg	tcagtgtatg	tgtgtgggac	atgggtgtgc
2701	aaatgtccct	caggaccccg	cttcagttct	tctggggaca	gacccagagt	ggagttgtct
2761	gtcaccccca	ccagcagggc	acagggtccc	gggtcccccac	gtctctgcca	acacttcccta
2821	cttccctgtg	ttcttgatcc	ccggccatct	attgagcgtg	agacagggtc	gaagctttga
2881	agatgggctt	tgtcttctgc	ccagaaaacc	ccctcttaag	aattttaact	cagaaaagaca
2941	aacgcggggg	agctgggtga	gggcccgtga	cggggactgt	gaogtaataa	aaacacacaga
3001	cttgganacc	accttagggg	ccccatgggg	ccggacagag	ccacacccac	cgacctgggtg
3061	cctctctgct	ggcgtctgct	ccacggagca	ttccaggacc	tgggtgaccg	ggagccaggga
3121	ggtggggagca	tctgaggtgc	aggtccacac	ggcaggaggt	gtttgcacaga	ggtattgcag

FIGURE 6B

3191	ogoggacogga	gtgtcctgca	gatgaocgtg	tctgtcctgt	agatgaocgt	cgtaaggag
3241	gtttacaca	tagcccccgg	gaagccccc	caacaccagc	cggaggtgt	aggcttctgc
3301	ggctccccc	tggggcaggg	ggaggacccc	gggcaggtcc	aggacccccc	ggagcagctg
3361	cttctccaa	cctgccaggg	ttaatgagga	ggcccagag	tgaggtggag	gcacaaatggg
3421	actcagggcc	ggagcctctg	gcctggctgg	atcagggctg	gcattggaca	agcgcagctg
3481	actcccgatg	tgcattggca	ggagacactc	tgggcctcag	tttcccttgg	aattgtgaac
3541	ctgaaacaga	tcagcccgag	gacctccccc	ggtcttccag	gggtctctgg	cagctggggc
3601	gggtctctct	gaaatagagc	ctcctccagg	gaccccccac	agccaccacg	actgagcacc
3661	ctggccatgt	gcattgcctg	gcctcagcag	agcctgcctg	gcctcccgctg	ggctaaagcag
3721	tgggtgggag	ggagctccag	cctcgtgggc	cctgcctggg	cctcggggac	ccatgggtcag
3781	tggctggggg	tgcctcccgag	aggctgggat	tccttccag	caggagccgc	agtggggctg
3841	agtgtgaggg	aggctgggtg	accactgttt	ccatggaccc	tgcctccag	gcagccctg
3901	ccttccagcg	gcttggccat	ctaggacggg	tgcaggttgg	ggtaggccct	ctctcctctt
3961	cagattctca	gaagctgtct	gggtgggggg	cgtcctgggc	ctcagggcac	agagctgcac
4021	atccttctct	atccagccct	ctccctctgc	acagccctcc	cccgagagca	aacacacgtg
4081	gctggagcgg	ggaagagcac	ggtgcctctg	gtggcctggg	ctgggttggg	gcacaggctc
4141	cctgctacat	aagctggggc	ccccagggga	gcacgcaccc	ggcccggtcc	cctccctgc
4201	cgtcccccgt	ccccccccc	tgcagccccc	caggatgggt	gcccgcagcg	cgtgcctggc
4261	gctgggtgtt	gctctggggg	ccatgctcgt	ggtgcctcag	gcaggtacga	gccccccact
4321	cggcccccct	tcgatgctgt	cttcacgggg	gggtctctct	caggtcgtct	gcctgggagc
4381	ctctcctgca	gagtgcacgg	gcagatcccc	ctacgactcc	ctgagtctcc	tggatgggac
4441	cctaccogtc	ccccccacag	ggtctctggg	ccccacgggc	tcacagtgtc	gcacaaactca
4501	ggggctgggt	tggatggggt	gtccagggag	aggctggccc	ctgacccag	ggcaggcccc
4561	ctgggagacc	accgaaagg	tcttggctct	gggggtggga	caggagtggg	caatggggga
4621	gggggtccac	gctgggggtc	tctctgggag	cccatgaggg	ccaggccatc	gagtgcagcag
4681	gggcaggctt	agcgtggacc	cctgtccagg	accggctcta	cccttcacga	cctccctggg
4741	gatcacagct	ggcagggcag	gtgagggtaa	ccgggaccc	caagggtctg	acagccagcc
4801	gcagagcccc	cggcctccac	ccacgctcga	ctccccacgg	ccatctgtgg	gcattctcat
4861	cggcacgggc	tgcctgggtc	tcagcccgag	gttttccctc	gtctgctgtc	tcttggccag
4921	agccgcagca	ttaatactta	ctgtcaatag	agaaagatgc	agcccccagg	gcacccggga
4981	gacacccagc	caggctggcc	atgaggctgc	tgcagccct	ccctgcccgc	ccctccggcc
5041	cctcccaagg	ttggggctct	ggctgggcag	gtgaggtccc	ctggggctct	tctccatctg
5101	tgggaaggag	gctgggtggg	cagccagggc	ggagccaggg	ggcttccccc	agtggctccc
5161	agcctggggc	cggggggagc	tgcctctggg	tgcaggttt	gggggtgggt	tcgacccagaa
5221	tgcacacccc	cttgcattct	attctctcgg	gcattgcagc	cttggctccc	ctcactctgag
5281	caggcagggc	ctagggaact	tcagccccc	cgtcctcctg	tcctccacag	ccgtcccaagt
5341	tggggagatc	aagcccttgg	cagggaactgt	gctttagtca	ccagatgcac	gtctgtgggc
5401	cgggggaagg	agccctgcac	agagcagctc	catgttaggg	gacacacccc	aaagtgtatg
5461	ggtggctggg	ggtgggcact	tctctggcta	caagatggag	gcccaggtgg	tcacgcccac
5521	ggagggcact	gcacggagca	gataacccag	ggcagtccag	ctgggcaggg	gaggggtctg
5581	ctggggggga	ggggttgcc	gggttgggga	ggggctgtct	ggggcagggg	aggagctggc
5641	tggggcgggg	gaggggtctg	agggcacagg	aggggctggc	tggggctggg	gaggggtctg
5701	tggggctggg	aggggtctgc	tgcggcggga	gcggggctgt	gggagtggct	ggttgggtctg
5761	gcacacaggg	gcagggtctg	gagctgtggg	tggggctgga	ggactcaggg	atcggctggc
5821	cttctgggaa	aggcagtcac	cctggatctc	tggaggcggc	ccctgtgggt	gttccacagat
5881	gtcagcagga	cctggctgga	aaagccaggc	agggccaggc	cagagtggga	accacagggc
5941	cggcccccct	ctgagccctg	accatgcttg	tggggctggg	ggcctccact	ccccccccc
6001	ccacacacac	ctcagatcag	gataccaggga	ggagctctgg	ggtcctgtga	agggggcgcc
6061	ccacacacac	ctgggcagag	aattggccggg	ggtcctcaga	gtcctgtggg	tggagctctg
6121	ctcctccacg	cctccatggg	gttggctggg	gaggtcttgc	ccggaggcgg	tggcagcct
6181	gggggacctt	ggggcgccat	cccagttaca	acggccacac	agcttggcgg	gcacagagtc
6241	ctgccccacg	cctgccccac	tgcctctgac	ttaggatcta	gttcgaaaat	ggttctgtgt
6301	ttaggtttct	gctaagtcac	gcctggaagg	ctccaaagtgt	gtcctcccaa	caagctgggt

FIGURE 6C

6361	otttgttcoot	otccaaggga	tgtgtgggat	ggggcgaaat	cccccttgg	gggggcaaac
6411	goottttcoot	gattccatct	tctcccccat	coottgagaa	ggaggcaaca	tccccgootg
6461	tcagtcgggg	acagggcagg	ccgtgctggg	ggagctcag	ggctccctgc	tggaggttct
6511	caccccgag	gctttccata	gcattgagca	ggagcggagg	cattctgggc	tgaagggttg
6561	gggggctga	ggggctgggg	aggagtcccg	gcoctggcca	cagtgtgtcg	tjaggggtgaa
6611	cccgagggc	atggagaccc	ccaccaagga	ccccacatgc	ggctgcggca	ccaggcatgt
6711	ggccaggtcc	gtgggtgggt	ccgtggctgg	cagccacatc	tagttccctca	ctjactccca
6761	ctccctcttc	ccacagagac	ccagggcctc	gtggagccga	gttgggggaa	tgcaggggcac
6811	acbatggatg	gcggtatgtg	gccaggtctc	gggggtgggg	gttccctgac	aggctggagg
6861	ggctggaatt	ggggctgggg	caggcagacg	ccctcccaag	cagccatggg	tctgacagag
6911	acccctccctg	ggctccctgc	ccaggacaat	acccagccac	cgaggcggag	cttgggtgtc
7011	caaagaagag	gaaagtgcag	agcagagaga	cattgcacaca	gaagcacacg	cgtggacagg
7061	cacatggctg	cccacactta	cactggcaca	cacatgtgtg	cacacacagg	ccaaaaacaca
7111	agggcagcag	tgtttgtggg	gcagacaggg	ccaagggtta	aggggtgtgc	ttggcccccag
7211	cccatcagtc	ttgggtctcc	cttcaactct	gggtggctgg	gaggagggtg	ggcccccggg
7261	aggggtgtct	tgttccctcc	ccctggccac	gttccctggg	tgaaccagct	tcaaccacag
7311	gtgccccgac	gtccctcgcc	acccggcgcg	tjagcttctg	tccacccgtc	actgtcttcc
7361	ccagctcgag	ccgttaagcag	atgctgcctc	tgcacgcggg	gaaggggggt	tttggccagtc
7411	ccaaaggttg	ggggccagat	ctagggggtg	agctgcaccc	aggtggggcc	gttggggccag
7511	acccagagtc	ctccgtgtgg	gggtctctcc	ggtcactggc	cacccctggg	gatggggacg
7561	ggctcaggggt	cttggagcaa	aacagaccca	gtccaggggt	agccaggccag	ggccagagcca
7611	gcagccgacc	atgggtcttt	ccattccaaa	aaaccagggt	ccctcggccca	ggggagggcta
7661	ccccgtgggg	ggctggcatg	gggatgggcc	ccatcccgcg	ctcccccacag	ccctgaaacc
7711	gggcacacat	gggggggtgt	gcagcccttg	gggtgacttc	cactacaaag	ccctcgacgg
7811	cjagctcttc	cgcttccctg	gcctttgcac	ctacgtgttc	tctgagccat	gcggcgccgc
7861	ctacgaggac	ttcaacgtcc	agctacgcgg	agggctagtg	ggctccaggc	ctgtgtgtac
7911	ccgtgttctc	atcaaggccc	aggggtgtgt	gctgaaggcg	tccaaaggct	ccgtctctat
7961	caatgggcag	cggtgagccg	gcacccctgg	ggaggggcca	gggcccggcc	acacagtgtg
8011	accccccac	acggccatgt	ctgacctggg	ccagggtctg	gggtgggttg	gggtggccagg
8111	cagccaggag	agcggggccc	agggagagac	cccgctgtct	gcgcaggggg	gagctgcctt
8161	acagccgcac	tggctccctg	gtggagccga	gcggggacta	cattcaaggct	agcatccggc
8211	tgggtgtgac	attcctgttg	aacggagagg	acagtgcctc	ggtgagggaag	ccccctcgcc
8261	ccttgccctc	tcaggccttg	ccacaaaaac	ccacccgggg	gtcgagggat	gcctccctgg
8311	gcttgggggt	acggggcttg	gggcattgtg	ccagtggggg	gatcagagggt	ccctgaggctg
8411	gagctgcccc	tccccactct	cagctggagc	tggatcccaa	atacgcacaa	cagacctgtg
8461	gcctgtgtgg	ggacttcaac	ggctcccg	ccctcaacga	gttctatgoc	ccagtgagct
8511	gccacctggg	tjagggggcg	gtgacacatt	atgtccggcca	acgaagagcc	acagtcccgj
8561	ggaggccggg	agggggcgga	gtggggaccc	ggcacccagg	agggaggggc	ccagaggact
8611	gtgccttaca	tgggtggagg	agtgcctctc	gggggtgttg	ggccctaggc	aggagtggga
8711	gtccctctgg	ctgggtccag	gaagtgggag	cccatatctt	gtcccccagg	gcctccagca
8761	gccacccac	ccctgtcttc	ttcccgccag	acgcacaggct	gaccccgctc	cagtttggja
8811	acctgcagaa	gttggatggg	cccacagagc	agtgcccgga	cccgctgcct	ttgcgggcgg
8861	gcaactgcac	ggacgaggtg	agtccccgc	caccccccag	tccctgggcag	ggacggccct
8911	caggtccagg	gggagctggg	ccgaggtctg	aggaatgttc	ccagctgggt	gagagatggg
8961	gcattggag	ggaggccggg	cagccacccct	ctgtgtgtct	agttccacgg	tacacactgt
9011	ccgagtggtg	tjagctgggt	gttccatcagg	ccacggctgt	gcacatctgt	gtgagcaaac
9111	acaggcccat	gttgcacagg	ctgggtctgag	ggtgggcact	ggggaagccc	ggagccagcc
9161	cttccaccca	gcaggtggac	tcagaagggg	ccctggaggct	ccaggatccc	caaacccagca
9211	ggatctctga	gccttaaaatt	gtgctgtgaa	tjagacagat	agccccctgt	tjagctgggg
9311	cccgagcccg	gcagccctgg	ccctggggag	ggaggacact	cagccactgga	ctgccttgaa
9361	cctgcggggc	tgcacagaga	ggcggggctc	ccacctccccc	tcccttgctc	ccgtccctgg
9411	gggtgggggt	tgcaccttct	ttgggcctct	actccacggg	caggccacatc	ccgagtaggg

FIGURE 6D

9481	gaccccgggg	tgaacgggtca	ctcccccaagg	gccaagcaga	gctctgcatg	gccaacagtgg
9541	gtggaagggg	tgggggtggg	tacaaggaaac	cccgacaggg	agaggggttc	ccgggootggc
9601	ctggcatggg	tccatattcca	gcacccgtggc	agcccccacg	gatggcaggg	gtggccagggc
9661	tggcccactg	tgcctcccacg	gagggcatct	gccaacggac	ccgtgtgggg	ccgggootttg
9721	cgagtgccca	cgcaactgggtg	gacagcaactg	cgtaacctggc	cgccctggccc	caggacactgt
9781	gcgcctggcc	caactggccg	tgtggcaact	ttgtggcata	ctcacggccag	tggggccacg
9841	cgggggggcca	gcggcggaac	tggagggtggc	ctgagctctg	ccgtgagtgc	tcccaggggcc
9901	tcggccaggg	attgtgcccag	agagaaggggg	cagggggagc	gccttggggg	ccactggggg
9961	tggggaggcc	tgggggacag	gggtggaggg	cagaggaccc	accccaggca	tagtggggag
10021	aggccacccc	aggaccccag	gaggggggtgg	ggccggccggg	ggctgcaggg	gaaggagagg
10081	cttctgggaga	ggcttctgca	gcaggtggca	ggggctgggg	ctggagggtg	tagctggcca
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10321	gagtgctggc	caacctgcac	ggacacactgc	tcccaacccc	agcgccggca	gctctggcag
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10441	cagggggctt	tcagggtccct	gctcccaacc	ccggccccag	ccctacacag	cttgggaagca
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12121	gcaggtatgt	ggctctccca	ggaaggccgg	gctgggtggc	gcctgcttgc	aggggcagct
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12421	ctccctgggtc	tcactccggg	gtctcagtg	ggtagggccg	cccaactggat	ccctggcccc
12481	ccccatctag	ccagatctgt	ccctgcaccc	ctgaacgggc	ttctccccc	actcccgcca
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FIGURE 6E

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13201	aacacctgga	aggcccaggc	tgccctgtgc	aatgcacagg	acagctctga	ggaccccctg
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15661	tcaggctgtg	tctgtccccc	gggctggtg	tccgatggga	gtgggggctg	cattgcocag



FIGURE 6F

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15731	gaatgcaaca	cctgggtgggt	cgtgagtttc	toggaggagc	caggtgggga	gggcgggggc
15841	ggggaggga	gggggtgggg	agggaggggg	cagggaggga	aggggggggg	gagggagagg
15931	ggcagctgg	ccaggggtgag	gtgggggggt	ggcaggagag	agagttgcta	ggaaagccat
15961	gggocgtcct	gtgocgtcct	tggaggggtg	cccaggggoc	atggtgtctc	caggagcctg
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16231	caggtcgggc	ctggggaggc	tgaggccccc	tgctgacctg	cacaggcctg	ggtgcccggc
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18181	ccaaggaccc	ctgcacgggc	aaccccttcc	gcaagtccct	ggccccagaa	cagtgcagca
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18721	tgtctgtaat	cccagcactt	tgggaocgtg	agggcaggtg	atcaactgag	gtcaggagtt
18781	tgagaccagc	ctggtcaaca	tggcgaaacc	ccgtctctac	aaaaaatata	aaaaatagcc

# FIGURE 6G

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18451	tgaacootgg	aagaggaggt	tgcagtggag	caagatogtg	ccactgcaot	ccagootaag
18461	caaaaagagt	gagactotgt	ctcaaaaacaa	aacaacaaaa	aacbaaaaag	cagtttcgtg
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18631	gcaggttgac	tccaccaagt	actacgaggg	ctgggtgaac	gacggctgtg	ccctggagctc
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21091	gacccctggg	gctcttagtg	cagggtgcct	gtatggtagc	gacagtccca	atccactgac
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# FIGURE 6H

21661	ccccgaagc	ctcagcaca	tgattgatgg	gataccccaa	ggagacaata	aagctttcct
21721	ggaactccgc	ccatccctca	gcacggccta	tcccagccag	ccagctccct	caaggccagg
21781	ctgcccaggcc	ccagtccttc	atgcagaaa	ggctctaac	aaggctgagg	caggcaactgg
21841	ggtcccccagt	atcccacagg	ggcagggcca	gccttgggga	aagggtcctc	tggggccctt
21901	ccaccttggtg	aggccaggac	tggaggatgc	tgagccagga	cccccttccc	atgccccttg
21961	caggcccggc	cctcccggtc	tcccacgtgt	gtgtcccgga	ggtctgcgga	tggtcagatc
22021	ggtacaaatgg	gcacccgcca	gagcccgccc	tgggaggcgg	agactttgag	acgtttgaaa
22081	acctgaggcca	gagagggtaa	caggtatgcc	ctgtgctggc	tgacatcgag	tgcggggcgg
22141	cgcagcttcc	cgcacatgcg	ctggaggagc	tgggcccagca	ggtggactgt	gaccgatgc
22201	gggggctgat	gtgcgcaca	agccaacaga	gtccccgcct	ctgtccagac	taagagctgc
22261	gggtttctctg	ctgcgaatac	gtgcctctgtg	gcccctcccc	ggccccaggc	accagccctc
22321	agccctccct	cagtgcacgc	acggagcctg	ctgtgcctac	cccaacccag	accacagcaa
22381	ccgaaaagac	cacctatagg	gtgaccccca	gcacccggtc	gacggcgccc	ctcacctcgc
22441	agaatgggtc	cagctcaggc	cccgtagcgg	tcaccccttc	ggccccaggc	accaccaact
22501	gcacgccccg	gtgtcagtgg	acagagtggc	ttgatgagga	ctaccccacg	cttgaaaca
22561	tgggagggga	cgttgagtcc	taagataaga	tcagggcgcg	tggagggcac	ctatgcacgc
22621	agcctaagga	catagagtgc	caggccgaga	gcttccccaa	ctggacccctg	gcacaggtgg
22681	ggcagaaggt	gcactgtgac	gtccacttcg	gcctgggtgtg	caggaaactgg	gagcaggagg
22741	gogtcttcaa	gatgtgctac	aactacagga	tc		

FIGURE 10

```

(-1098)  gag  ccacggagca  ttcaggacgc  tggtagaccg  ggagccagga
ggtgggagca  tctgagggtg  aggtcacacg  ggcaggaggt  gtttgcaaga  ggtattgcag
cgcggaagg  gtgtcctgca  gatgaagctg  tctgtcctgt  agatgaagct  cgtcaaggag
gtttaccaca  tagcccccgg  gaagccccc  caacaccacc  cggaggctgt  aggtctctgc
ggctccccc  tggggcaggc  ggaggacccc  gggcagggtc  aggaaccccc  ggagccagctg
cttctccaac  cctgcccagg  ttaattgagg  ggccccagag  tgaggctggag  gccaaatggg
actcaggggc  ggagcctctg  gcttggtctg  atcagggtct  gcattggaca  agcgcagctg
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ttgaaaacaga  tcagcccaga  gacctccac  ggtcttcaag  gggctctggt  cagctgggct
ggggtctctg  gaaatagagc  ctctccagg  gaccccccac  agccacccag  actgagcctc
ctggccatgt  gcattgctga  gctcagcagg  agcctgccc  gctcccccgt  ggttaagcag
tggtagggagg  ggagctccag  cctcgtgggc  cctgcccggg  cctcggggac  ccattggtcag
tggctggggg  tgcctgcccag  aggtgggat  tccctccag  caggagccgc  agtggggctg
agtgtgaggc  aggtgggtg  accactgttt  ccattggaacc  tgggtccaa  gccagccctg
cctccagcg  gctttgcct  ctaggacggg  tgcaggttg  ggtaggccct  tctctccctt
ccgattctca  gaagctgctg  ggggtggggg  cgtcctgggc  ctccgggcac  agagctgcaa
atccttctctg  atccaggcct  ctccctctgc  acagccctc  cccgagagca  aacacacgtg
gctggagcgg  ggaagagcac  ggtgcctctg  gtggcctggc  ctgggttggg  gccaaaggctc
cctgctacat  aagctggggc  cccaggggg  gcaagcaccc  gg  (+7)

```

FIGURE 11A

```
(-4169)  cctg gttgtgcoctg tccgtccagtg ggccagggtc taagggtctgt gaagaactcaa
catgccccca cctgctactt ctgaacacca ggcactggct ctgagacccc cgggctcttg
tggacatctc cccaggtgta ctgggcbagg ggacaggggc ctggccatcc caacacccag
gagcaagcag cccgtccact gcccaggtcc ccgaggcccg gaacaccttc ctgctggggc
caccacagccc tggacctgtc ccgcttggtc acacgatggg accctcggcc catcaggcag
tgagccccca ggagcgtgog totggcctgg taaggcctcc accccaggag ttgggggggc
cccgtgcccag ggagcaggag gotgcccagg tggagggtcc caccacagga ccactcccta
tccccagcac agcctggggc ctggctctga gtacacatcc tgggjcctgg ctctgagcag
accaagagcc catccctgct ttgtgacccc ctgggtctgt cctgacccc caggtgtcca
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tgccctggctg ctgatggaca ctggggcctg gctcaaacct gacccgtctg ggtcggggga
ggggagggtt gaggcacgtg gggaaacccg cccagtgac gactcttttg ggtggccaa
ccctccaggt gtccccacag gotgaggggg tgggcttggg gcagctgggt acagcagatg
gtggccctga tccctgggtc ctggacggcc totgaagggg totgtggggt cctggacggg
tccccattca tggcaggatt aacccccctc gggctctgtg tggctcaggg cggccctttg
tctccactgc cccctgggca gaatgagggg cagtgaacca cccagggtct ggctgggtc
agactccgtc agagcccgag ggcaagttcc tggcacgtcc gagggtggag gctccctctg
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ccctctatctt ctgtttccag cggcttcaac tgtgaagagg tgaactcttc aaacacgtct
agcaaacagg cccgactccc agggcccgat ccggggtgtc tcaatagctg tggccttgac
gtccacctcg gacccctgcc ccggacccag cccagttccc aatgggccc ctggcccggg
agggtgctag tgggagggag gagggcaaa gggggccccc cacttgcttg gtgcaactgt
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caggcaactg ggggggacag agggagctgcc tgagggtccc agctctgcca tggagaaaaa
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ccagtgggcc gccagccccc atgaaggccg cgggacccgg ccgtggtcag ggaggccag
ggacaggcag tgggggcccag caggggagac actaggcttg gcccacgac cccaggtggc
atcggtctgt gagctggagc cgggggcagg gaggggggat gtcacgaggg cttggctaa
gtgggagacc tgggcccgtg cgtcgggggg acgtctgcag cagaggcttg ggcagcaggc
acacccctcc tggcagtgog aggaacgagg cgcacacagc gcgggtagcc cccattttg
ccagcctggc ctggagcagg caggaaaggc ggggagagg gtctggctgg ggctgggtg
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aoggtgaac cgtattccac cgcacggatc agctcaca ga tctgaccca gtcctccgoc
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gtcacccccca ccagcagggc acagggtctc ggggtccccc gtctctgcca acacttcta
cttctgtgt ttcttgatcc ccggccatct attgagcgtg agacaggtoa gaagctttga
agatgggctt tccgtctgtc ccagaaatcc cactcttaag aatttaactt cagaaagaca
aacgcggggg agctgggtga gggcccgtga cggggactgt gacgtaaata aaacaacaga
cctgjacacc accctagggt ccccatgggg ccggacgagg ccacacccac cgaactgggt
```

FIGURE 11B

cttccctgct	ggcgtctgag	ccacggagca	ttcaggagcg	tggtgaccag	ggagccagga
ggtgggagca	tctgaggtgc	aggtcacacg	ggcaggaggt	gtttggcaaga	ggtattgcaag
cggggaagg	gtgtccctgca	gatgacgctg	tctgtccctgt	agatgacgct	cgtcaaggag
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atccttctctg	atccaggcct	ctccctgccc	acagccctcc	cccgagagca	aacacacgtg
gtggagggg	ggaagagcac	ggtgcccctg	gtggccctgg	ctggcttggg	gccaaggctc
ctgctacat	aagctggggc	ccccaggggg	gcaagcacc	gg	(+7)

FIGURE 12

```

(-13)  ccagggga  gcaagcacc  ggcccggtc  cctccctgac
cgcccccgtc  cccccaccg  tgcacagccc  caggatgggt  gcccagagcg  cgtgocggac
gctgggtgttg  gctctggggg  ccctgctgtt  ggtgcccag  gcaggtaaga  gccccccact
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cacagagagt  ctccagatcag  gatccaggga  ggaggtctgg  ggtccgtgga  agggggggcc
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accatggatg  ggggtatgtg  gccaggctcg  ggggtggggg  gttccctgac  aggtggagg
ggctggaatt  tgg  (+2738)

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marked-up copy

# FIGURE 6 A

1 ggtaccccctg gttgttgccctg tccgtccagtg ggcacagggtc taaggggtgt gaagactcaa  
61 catgccccca cctgctactt ctgaacacca ggcactgggt ctgagacccc cgggcccctgc  
121 tggacatctc cccaggtgta ctg jgcccagg ggcacagggtc ctggccatcc caaaccccag  
181 gagcaagcag cccgtccact gccaggttcc ccgaggcccc gaacaccttc ctgctgggct  
241 cccccagccc tggacctgtc ccgcttgggt acacgatggg accctcggcc catcaggcagg  
301 tggacccccca ggagcgtggg tct jgcccagg taaggccctc accccaggag ttgggggggct  
361 cccgtggccag ggagcaggag gct jgcccagg tggagggttc cacacagcta ccactcccta  
421 tccccagcac agcctggggg ctggctctga gtacacatcc tggggcttgg ctctgagcag  
481 accaagagcc catccctgct ttgtgacccc ctgggtctgt cctgacaccc caggtgtcca  
541 cgggtgagct gggggccagg tcajtgccct ggagctgatg gacccctggg cccgggtccag  
601 tgcctgggtg ctgatggaca ctggggccctg gctcaaacct gcacccgtgt ggtcggggga  
661 ggggagggtt gagccacgtg gggaaacccag cccagtgac gactcttttc ggtggccaa  
721 cccctccagg gtccccccag gct jaggggg tgggcttggg gcagctgggt acagcagatg  
781 gtggcccctga tcaactgggt ctggacgggc tctgaagggt tctgggggt cctggacggg  
841 tccccattca tggcaggatt aaccccccctc ggggtctgtg tggctcaggg ccgccccttg  
901 tctccactgc cccctggcca gaatgaggga cagtjaccca cccagggtct jgcttggctc  
961 agaactccgt agagcccgag ggcaagttcc tggcacgtcc gaggtgggag gctcctctgc  
1021 gctccaggag gctgtgccc gccccccctc ccggcaggaa ccggctgtgt ccccttccct  
1081 ccttttatct ctgttttcag cgccttcaac tgtgaagggt tgaactcttc aaacacgctg  
1141 ajcaaacagg cccgaactcc agggcccgcat ccgggatgtc tcaatagctg tggccttgac  
1201 gtccacctcg gacccctgcc cgggacccag cccagttccc aatgggccc ctggcccggg  
1261 aggtgcccag tgggagggac gagggccaaag tggggjccc cacttgtttg gtgtccactg  
1321 gtgcccaggg ccaactgggg gggaggctgt tccagggttg agjccgggag ggttggacca  
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1621 atcggcttgt gagctggagc ccggggccagg gaggggggat gtccagaggj cttggctaa  
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1741 acacccctcc tgcacgtggg aggaacgagg ccgcacagcg gcgggtagcc cccatttgj  
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3121 ggtgggagca tctgagggtc aggtccacac ggcaggaggt gtttgcaaga ggtattgca  
3181 ccgggacgga gtgtccctga gatgacgtg tctgtccctg agatgacgt cgtcaaggag



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3241	gtttaccaca	tagcccccgg	gaagcccacc	caacaccaga	oggaggtgct	aggettcttgc
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# FIGURE 11

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English - 11

collective experience - individual terms  
products - (and)

FIGURE 10

```

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```



FIGURE 11 A

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FIGURE 12

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